Craig Zellner

EDT 672

Assignment #2

**Part A: Cell Unit Objectives**

1. Upon completion of this unit, students will be able to compare and contrast prokaryotic and eukaryotic cells based upon the structures and functions of each type of cell. (F.12.1, WI Science Standards)
2. During the unit students will evaluate the normal structures and the general and specific functions of cells in single-celled and multiple-celled organisms. (F.12.1, WI Science Standards)
3. Upon completion of this unit, students will be able to combine multiple phases in the life cycle of a cell to explain how a cell differentiates and reproduces. (NETS, 3.a)
4. Students will be able to demonstrate proper techniques and skills needed to find and view specific structures of a cell under the microscope. (C12.2, WI Science Standards)

1. Students will design and build a model of a plant cell or animal cell that illustrates required cell structures that were discussed in class. (NETS 2.b.c)
2. Students will investigate the relationship between diffusion and the size of cells in the laboratory. (C.12.2, WI Science Standards)

**Part B: Biology A Course Outline (12 week Course)**

1. Unit 1: Biology and Characteristics of Life (2 weeks)
   1. What is Biology? (1/2 week) (F2F)
   2. Application of the Scientific Method (1/2 week) (F2F)
   3. Explore characteristics of living organisms --- cells, growth and development, homeostasis, energy, reproduction, levels of organization, stimulus and response, adaptations (1 week) (Online)
2. Unit 2: Ecology and Population Dynamics (3 weeks)
   1. Examine relationships between organisms within ecosystems (1 week) (Online)
   2. Determine limiting factors (biotic and abiotic) in the environment (1 week) (F2F)
   3. Understand demography and human population trends (1 week) (Online)
3. Unit 3: Cell Structure, Function, and Reproduction (3 weeks)
   1. Explore history and types of cells (1/2 week) (F2F and Online)
   2. Determine cell structures and their functions (1.5 weeks) (F2F and Online)
   3. Understand the cell cycle and reproduction --- Interphase, Mitosis, Cytokinesis (1 week) (Online)
4. Unit 4: DNA and Genetics (3 weeks)
   1. Determine the composition of DNA (1 week) (F2F)
   2. Explain and illustrate Mendelian genetics (1/2 week) (Online)
   3. Explain and illustrate complex inheritances and pedigrees (1.5 weeks) (F2F and Online)
5. Final Exam (1 week) (F2F and Online)
   1. Individual and Peer Review (Online)
   2. Take final exam (F2F)

**Part C: Welcome Letter**

Dear Biology A students,

Welcome to your 1st semester biology class! I am your biology teacher and my name is Craig Zellner. I have been a teacher at West De Pere High School for the past 5 years and I am excited to be implementing online learning into my instruction for the first time. To be successful in Biology A, you will be expected to maintain daily attendance by online login and meeting face to face, submit assignments in a timely manner, effectively communicate and collaborate with your peers, and apply problem solving skills to classroom activities.

Biology A has 4 total units, which begin with the study of biology and the scientific method, continue through the study cells and cell reproduction, and conclude with genetics and how information is passed from generation to generation. This is a hybrid course in biology, meaning that we will meet face-to-face as usual following a daily school schedule, but be required to complete different elements of the course online. Some of the tasks you will be required to complete online include readings, participation in discussion boards with peers, quizzes, viewing of online lectures, and other activities and assignments.

The required textbook we will be using is (2006). *Glencoe Science: Biology.* Glencoe/McGraw-Hill. 1st Edition, which will be distributed in our first class face to face meeting. For the online portion of the course, we will be using wikispaces as our learning management system. This system can be accessed from anywhere by clicking on the following link <http://biologya2013.wikispaces.com/>.

Once you have read this letter and before class officially starts, there are a few things I would like you to do. First, carefully read the class syllabus by clicking on the link on the [homepage](http://biologya2013.wikispaces.com/home), which will give you more information about Biology A. Second, send me an email to confirm that you have read this letter along with the course syllabus and please do not hesitate to ask questions in your email. Last, please respond to the ice breaker question on the class wiki page by the start of class.

All students and teachers are required to use their google email address provided by West De Pere School District. Please be sure you log on to your email prior to the start of class. If you have an issue regarding internet access at home please contact me via email at [czellner@wdpsd.com](mailto:czellner@wdpsd.com) or by phone at 837-2258 Ext. 4259.

I am looking forward to seeing you soon in the classroom!

Sincerely,

Craig Zellner